

Atty. Docket No. YOR920010425US1  
(590.072)

**REMARKS**

Applicants and the undersigned are most grateful for the time and effort accorded the instant application by the Examiner. The Office is respectfully requested to reconsider the rejections presented in the outstanding Office Action in light of the following remarks.

In the Office Action dated August 7, 2006, pending Claims 1-21 were rejected and the rejection made final. Of these claims, Claims 1, 11 and 21 are independent claims; the remaining claims are dependent claims. All claims stand rejected under 35 U.S.C. § 102(e) as being anticipated Chaudhari et al. (hereinafter "Chaudhari"). Reconsideration and withdrawal of this rejection is respectfully requested.

Before addressing the merits of the rejection, Applicants respectfully submit the outstanding Office Action was marked "final" in error. The outstanding Office Action is the first Office Action to issue after the submission of a Request for Continued Examination. The outstanding Office Action references "Applicants' earlier Application", which is not the language of form paragraph 7.42.09. See MPEP § 706.07(h). Indeed, Applicants respectfully submit MPEP § 706.07(b) indicates the finality of the outstanding Office Action should be withdrawn.

The Office notes that Chaudhari has a common assignee and inventors with the present application and asserts the applied reference constitutes prior art under 35 U.S.C. § 102(e). Applicants do not now address whether Chaudhari is in fact prior art, but reserve the right to do so.

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The instant invention is directed towards a method for systematically adapting classification systems using a much more sparse adaptation data set than previously used in the art. The instant invention analogizes the classification system as a black box, and analyzes the scores generated by the black box to adapt these scores. The present invention aims to maximize the score levels in its adaptation. The adaptation of the classification system is carried out on the derived functions of the classification system whose values are of lower dimension than the dimension of the system parameter space. Thus, a relatively small amount of data may suffice for an effective adaptation.

As best understood, Chaudhari appears to provide a classification technique, by providing acoustic feature transformations to model the voice print of speakers with the aim of maximizing the likelihood of the speaker training data to the resulting model in the new feature space. Speakers are recognized or classified by appropriately comparing the likelihood of the test data in each transformed feature space and/or by comparing transformation matrices obtained during speaker enrollment and testing. (Column 2, lines 13-25) The model is adapted using the training data that is parameterized by the maximum likelihood estimates of mean vector, covariance matrix, and component weight. (Column 4, lines 30-49). This is in stark contrast to the instant invention.

Unlike the instant invention, Chaudhari adapts feature spaces and relies on maximum likelihood levels to provide a classification technique. The instant invention adapts a classification system by relying on score levels obtained from the classification system. The discriminant function brought to the attention of Applicant by the Office is used in the adaptation of the feature space, not in the adaptation of a classification system.

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There is no suggestion or teaching of adapting such a function, or adapting any derived function of the classification system, in conjunction with the adaptation of a classification system.

Further, the outstanding Office Action asserts that the adaptation of the classification system via adapting at least one derived function of the classifications system is met by Chaudhari (Section II, Page 17) by utilizing diagonal covariance in adapting the feature space. As is well-known in the art, covariance is not a derived function of a classification system. Rather, any classification system represented by a model such as a Gaussian mixed model necessarily is a distribution or mixture of distributions each with a covariance. The diagonal covariance of a Gaussian model such as that used in Chaudhari is thus not a derived function of the classification system, but an inherent characteristic of the system. Thus, Chaudhari fails to teach or suggest this crucial element of the instant invention.

Applicants present a method of **“adapting the classification system via adapting the at least one derived function of the classification system”**. (Claim 1) Similar language appears in all of the independent claims. There is no teaching or suggestion in Chaudhari of the adaptation of any derived function of the classification system in the adaptation of the classification system. In fact, there is explicit teaching to the contrary in Chaudhari, as stated above, wherein, in order to provide a classification technique, the adaptation of a feature space (not a classification system) is performed with the aim of maximizing the likelihood of the speaker training data.

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It is respectfully submitted that the applied art clearly falls short of present invention in that the applied art does not disclose or suggest "adapting the classification system via adapting the at least one derived function of the classification system".

Accordingly, Applicant respectfully submits that the applied art does not anticipate the present invention because, at the very least, "[a]nticipation requires the disclosure in a single prior art reference of each element of the claim under construction." W.L. Gore & Associates, Inc. v. Garlock, 721 F.2d 1540, 1554 (Fed. Cir. 1983); see also In re Marshall, 198 U.S.P.Q. 344, 346 (C.C.P.A. 1978).

In view of the foregoing, it is respectfully submitted that Claims 1, 11, and 21 fully distinguish over the applied art and are thus in condition for allowance. By virtue of dependence from what are believed to be allowable independent Claims 1 and 11, it is respectfully submitted that Claims 2-9, and 12-20 are also presently allowable.

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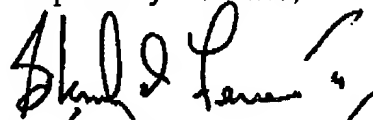
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In summary, it is respectfully submitted that the instant application, including Claims 1-21, is presently in condition for allowance. Notice to the effect is earnestly solicited. If there are any further issues in this application, the Examiner is invited to contact the undersigned at the telephone number listed below prior to the issuance of an Action.

Respectfully submitted,



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